

CLAIMS

1. A fuel cell which comprises a cathode and an anode arranged to sandwich a proton-conductive ion exchange electrolytic membrane, oxygen and hydrogen containing carbon monoxide being supplied to the cathode and the anode, respectively, in which the cathode comprises an electroconductive porous substrate which carries thereon platinum or a platinum alloy and a proton-conductive ion exchange electrolytic polymer, and the anode comprises an electroconductive porous substrate which carries thereon platinum or a platinum alloy and a proton-conductive ion exchange electrolytic polymer, and further at least the anode carries a proton-supplying material thereon.

2. The fuel cell according to claim 1, wherein the proton-supplying material is at least one selected from the group consisting of:

- (a) a proton acid,
- (b) a salt of a proton acid and a basic compound, and
- (c) an electroconductive polymer composition doped with a proton acid.

3. The fuel cell according to claim 2, wherein the proton acid is a mineral acid.

4. The fuel cell according to claim 2, wherein the proton acid is an organic acid having, in the molecule thereof, an acidic group selected from carboxyl, sulfonate, sulfate, phosphate, and phosphonate groups.

5. The fuel cell according to claim 2, wherein the proton acid is a polymeric acid having, in the molecule thereof, an acidic group selected from carboxyl, sulfonate, sulfate, phosphate, and phosphonate groups.

6. The fuel cell according to claim 5, wherein the proton acid is a polymeric acid crosslinked with a crosslinking agent.

5 7. The fuel cell according to claim 2, wherein the basic compound which is combined with the proton acid to form the salt is a polymer having, in the molecule thereof, a basic group.

8. The fuel cell according to claim 5 or 6, wherein the polymeric acid has an ion exchange capacity of 1.6 meq/g or more.

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